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DAVID M. TUMEY
5018 NEW CASTLE LANE
San Antonio, TX 78249

EXAMINER

HESSELTINE, RYAN J

ART UNIT PAPER NUMBER

2623

DATE MAILED: 02/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/545,336

Applicant(s)

TUMEY ET AL.

Examiner

Ryan J Hesseltine

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments on pages 6 and 7, filed December 9, 2003, with respect to the 35 U.S.C. 103(a) rejections of claims 1 and 2 have been fully considered but they are not persuasive.
2. On page 6, fifth paragraph, applicant states, "Morinaga [USPN 6,137,685] does not disclose a 'human user identification and verification system.' Morinaga is not at all concerned with facial recognition." The examiner understands the assertion that Morinaga is silent on this particular aspect, but reminds applicant that claims 1 and 2 stand rejected in view of the *combination* of Morinaga with Wang (USPN 6,038,333). In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Wang explicitly discloses a face image database for human user identification, verification, and recognition.
3. On page 7, second paragraph, applicant states, "Morinaga does not state or suggest that any images be stored on the card itself." Morinaga states that it is conventional to provide a card-shaped information medium (IC card) with a memory function wherein information processing is performed using the memory of the card-shaped information medium (column 1, line 19-27), therefore it is obvious if not inherent that the images are stored and/or processed on the card itself.

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4. On page 7, last paragraph, applicant states, "Applicants disagree that it would be obvious to combine Morinaga with Wang... That argument assumes that Wang is not already 'portable, personal, and easy to use to assist a user in recognizing or recalling people that the user has previously met...' It is not at all apparent why combining Morinaga with Wang would make Wang any more portable, personal, and image-recognition-functional than it already was." The examiner does not understand this argument as the combination of Morinaga with Wang is meant to show that it would have been obvious to modify Morinaga in view of the teaching provided by Wang, not the reverse, as applicant has asserted. The examiner feels that it has been clearly shown that Wang satisfies the deficiencies of Morinaga by providing the card-shaped information medium with the human user identification, verification, and recognition functions.

5. In response to applicant's argument that it would not be obvious to combine Morinaga with Wang, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

Claim Objections

6. Claim 7 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 7 recites exactly the same limitations as claim 6, from which claim 7 is dependent.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 10 recites, "The human identification and verification system of claim 3, wherein the personal identification device comprises a plurality of prerecorded representations of biometric data identifying an individual." It is unclear how a personal identification device can be comprised of representations of biometric data. The examiner believes that applicant intended this claim to recite, for example, "wherein the prerecorded representation of biometric data comprises a plurality of prerecorded representations..." or the like.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morinaga (USPN 6,137,685, previously cited) in view of Wang (USPN 6,038,333, previously cited).
11. Regarding claim 1, Morinaga discloses a portable electronic information device, comprising: a smart card (Figure 1, element 4; column 1, line 48-61); a silicon-based (electronic) video camera (Figure 1, element 28) embedded within said smart card for gathering facial image data (column 5, line 38-39); non-volatile storage media (address table) for receiving and storing

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said facial image data (column 5, line 39-43); a docking port (1) for receiving said smart card (column 3, line 3-12) and communicating said image data therethrough (column 1, line 15-28); communications interface (27) for transmitting said stored facial image data to a central processor (column 5, line 34-37) capable of receiving and manipulating said data (column 1, line 15-28).

12. Morinaga discloses that the card-shaped information medium conventionally performs information processing using the memory or the like of the card-shaped medium (column 1, line 19-28) and stores face pictures in an address table (column 5, line 38-43), but does not explicitly disclose that a digitizer is integrated within said smart card for digitizing said facial image data or that the portable electronic information device is used as a non-invasive human user identification and verification system. Wang discloses a person identifier and management system comprising a hand-held person identifier and management system (Figure 2), which allows a user to retrieve face-identifying information of a person from a face image database (column 3, line 20-34). Wang also discloses that the person identifier may include a digital video camera (inherently including a digitizer; column 4, line 41-44) for inputting facial image data (Figure 3B; column 5, line 19-22; column 8, line 19-31). It would have been obvious to one of ordinary skill in the art at the time the invention was made to integrate a digitizer within the smart card and use the portable electronic information device for human user identification and verification as taught by Wang in order to provide a person identifier and management system that is portable, personal, and easy to use to assist a user in recognizing or recalling people the user has previously met, retrieve personal-identifying information from a database in accordance

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with an input face image, or searching a face image database for similar faces in order to identify the input face (column 2, line 18-31).

13. Regarding claim 2, Morinaga discloses a method for capturing facial images of a human user, comprising the steps of: inserting a smart card (4) with embedded video camera (Figure 1, element 28; column 5, line 38-43) into a docking port (Figure 1, element 1; column 3, line 3-12); capturing one or more facial images (column 5, line 38-43) and transmitting said facial images to a central processor capable of processing said facial images (column 5, line 34-37; column 1, line 15-28).

14. Morinaga does not explicitly disclose that said facial image data is digitized or that the portable electronic information device is used as a non-invasive human user identification and verification system. Wang discloses a hand-held person identifier and management system (Figure 2) including capturing one or more first facial images at an enrollment station (inherent) for storage in a non-volatile media (profile database; column 3, line 35-45). Wang also discloses that the person identifier may include a digital video camera (inherently including a digitizer; column 4, line 41-44) for inputting facial image data (Figure 3B; column 5, line 19-22; column 8, line 19-31) and receiving and comparing first and second facial images and producing a signal (person-identifying data) indicative of recognition (match) or non-recognition (no match) of said human user (column 5, line 5-13). It would have been obvious to one of ordinary skill in the art at the time the invention was made to integrate a digitizer within the smart card and use the portable electronic information device for human user identification and verification as taught by Wang in order to provide a person identifier and management system that is portable, personal, and easy to use to assist a user in recognizing or recalling people the user has previously met,

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retrieve personal-identifying information from a database in accordance with an input face image, or searching a face image database for similar faces in order to identify the input face (column 2, line 18-31).

15. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lane (USPN 5,623,552, cited on applicant's IDS).

16. Regarding claim 3, Lane discloses a human user identification and verification system, comprising: a portable personal identification device (identification card 100; Figures 1A and 1B; column 5, line 6-13); a communications port (magnetic stripe reader 121) adapted to receive information from the personal identification device, the communications port being external to the personal identification device (Figure 3; column 6, line 13-18); wherein the personal identification device (ID card 100) comprises: a prerecorded representation (stored in memory 103) of biometric data (fingerprint) identifying an individual (Figure 2; column 5, line 21-31 and 37-42); a sensor (102) configured to capture biometric (fingerprint) data (Figure 1A, 2; column 5, line 10-20); and a communications interface (magnetic stripe programmer 110) configured to transmit information to the communications port (magnetic stripe reader 121), the information including a magnetic stripe signal if the sensed fingerprint information matches the stored fingerprint information (Figures 2, 3; column 6, line 2-18); and a processor (authenticator 107) communicatively coupled to the communications interface (110), the processor being configured to process the information transmitted from the personal identification device to the communications interface and produce a signal indicative of whether the biometric data captured by the sensor matches the individual identified by the prerecorded representation of biometric

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data (Figure 2; column 5, line 37-47). Lane does not explicitly disclose that the information transmitted to the communications port includes both the prerecorded representation of biometric data identifying the individual and the biometric data captured by the sensor. Rather, Lane discloses that the authenticator 107, which is part of the personal identification device (ID card 100), compares the prerecorded representation of biometric data and the biometric data captured by the sensor and produces an authentication signal if they match (column 5, line 49-column 6, line 12). This triggers the generation of a magnetic stripe signal containing predetermined account information that is read by an authorization device 120 and is transmitted to an approval center 125, which approves that requested transaction (column 6, line 13-43). It would have been obvious to one of ordinary skill in the art at the time the invention was made to transmit the prerecorded representation of biometric data and the biometric data captured by the sensor to an external communications port to be verified in order to save space on the personal identification device for the sensor, memory, and power source by processing the data in an external device such as a magnetic strip reader or authentication device such as an automatic teller machine (ATM) or the like.

17. Regarding claim 4, Lane discloses that the personal identification device is an identification card or a credit card, but does not explicitly disclose that the personal identification device is a smart card. The examiner takes Official Notice that smart cards are well known in the personnel identification art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a smart card as the personal identification device in order to provide a user with a small, portable device for identity verification.

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18. Regarding claim 5, Lane does not explicitly disclose that the communications port is a docking station, but the examiner takes Official Notice that docking stations are well known in the art and could very well be embodied as a magnetic stripe reader as disclosed by Lane. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a docking station as the communications port in order to provide the user with a convenient interface to verify the user's identity using the personal identification device.

19. Claims 6-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lane as applied to claim 3 above, and further in view of Piosenka et al. (USPN 4,993,068, cited on applicant's IDS), hereafter Piosenka.

20. Regarding claims 6 and 7, Lane discloses that the sensor 102 is an image-capturing device (column 6, line 45-56; column 7, line 3-21), but does not disclose that the biometric data identifying the individual comprises facial image data. Piosenka discloses an unforgeable personal identification system wherein users are identified at remote access control sites using physically immutable identification credentials such as a facial photo (column 3, line 44-48) stored on a portable memory device (column 6, line 40-48). It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize facial image data as biometric data identifying the individual as taught by Piosenka in order to provide a personal identification system providing for low cost identification of personnel at remote access control points using physically immutable identification credentials such as a facial photo without the need of a large, on-line centralized database to control each remote access control point by conveying unforgeable privilege information associated with the user (column 2, line 43-55).

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21. Regarding claim 8, Lane discloses that the personal identification device further comprises machine-readable storage media (memory 103) for storing the prerecorded representation of biometric data identifying an individual (column 5, line 6-20).

22. Regarding claim 9, Lane does not explicitly disclose that the storage media comprises non-volatile memory, but non-volatile memory is well known in the art as disclosed by Piosenka in the form of electronic memory cards such as PROM, EPROM, and EEPROM (column 6, line 40-48).

23. Regarding claim 10, Piosenka discloses that the personal identification device comprises (see above 35 U.S.C. 112, 2nd Paragraph rejection) a plurality (singly or in combination: facial photograph, retinal pattern, fingerprints, voice pattern, static or dynamic signatures) of prerecorded representations (credentials) of biometric data identifying an individual (column 3, line 44-48).

24. Regarding claim 11, Piosenka discloses that the personal identification device is configured to acquire and store data representing a plurality of biometric characteristics of a person (Figure 1; column 3, line 44-48; column 4, line 5-16).

Conclusion

25. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan J Hesseltine whose telephone number is 703-306-4069. The examiner can normally be reached on Monday - Friday, 8:30 AM - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 703-308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ryan J. Hesseltine
February 18, 2004


JINGGE WU
PRIMARY EXAMINER